

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. In the Office Action mailed July 13, 2006, claims 1-46 have been rejected. In response the Applicants have submitted the following remarks, amended claims 1, 4, 16, 28, 42 and 46, and cancelled claims 3 and 27. Accordingly, claims 1-2, 4-26 and 28-46 are now pending. Favorable reconsideration is respectfully requested in view of the amended claims and the remarks below.

Rejections Under 35 U.S.C. §101

Claims 1-15 and 42-46 have been rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The applicants respectfully disagree with this rejection. Specifically, within the Office Action it is stated that claims 1, 42 and 46 do not result in a physical transformation nor do they appear to provide a usual, concrete intangible result. More specifically, it is asserted within the Office Action that these claims do not appear to produce a tangible result because merely requiring pulse oximetry and electrocardiogram signals is nothing more than a computation within a processor. By the above amendments, the applicants have amended claims 1, 42 and 46 to direct these claims to statutory subject matter. Specifically, the applicants have amended claims 1, 42 and 46 to include the steps of configuring the single transducer to include a single electrode configured to acquire a pulse oximetry signal and an electrocardiogram signal, which the applicant submits is statutory subject matter, as this configuring step results in a physical transformation. For at least these reasons, the applicant's respectfully submit that claims 1, 42 and 46 are indeed statutory, and that the rejection under 35 U.S.C. §101 be withdrawn.

Claims 2-15 and 43-45 are dependent upon the independent claims 1 and 42. As discussed above, the independent claims 1 and 42 are allowable over 35 U.S.C. §101.

Accordingly, claims 2-15 and 43-45 are also allowable as being dependent upon an allowable base claim.

Rejections Under 35 U.S.C. §102

Claims 1-9, 13-18, 20, 22-23, 27-33, 35, 37-38 and 42-46 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0188205 to Mills (hereinafter Mills I). Applicants respectfully disagree with this rejection.

Mills I teaches a device and method for non-invasive continuous determination of physiologic characteristics. Mills I includes a device for the non-invasive monitoring of a physiologic characteristic including a tissue probe having a radiation emitter and a radiation detector configured to receive the radiation after absorbents through the patient's blood, a position sensor for determining the relative height of the probe compared to a level corresponding to the patient's heart, and a controller for computing the physiologic characteristics of the patient's blood based on the absorbance of the first wave length of radiation and the relative height of the probe. It is also stated in Mills I that the probe further includes ECG leads (Mills I, paragraph 13). However, it is also taught in Mills I that while the probe 24 may include a single ECG electrode 28 (Mills I, paragraph 77), the teaching of Mills I indicates that those ECG probes 28 included in the probe 24 are utilized to collect non-reference ECG signals only. Mills I teaches the use of appropriate probes placed opposite digits in Figures 19 and 20, on opposite extremities in Figures 9 and 10, or placed on a digit as is shown in Figure 1 (Mills I, paragraph 129). However, Mills I does not teach a single transducer having a single electrode, wherein the single electrode is configured to collect either a reference or non-reference ECG signal.

In contract to the teachings of Mills I, the present invention includes a transducer 50, preferably a pulse oximeter transducer including an electrode 55 that functions as a reference or non-reference electrode for one or more ECG signals (present invention, paragraph 24, Figure 2). In the present invention, in simplified instruments that forego

the use of a reference electrode, the electrode 55 can act as any suitable terminal of an ECG lead. The Applicants respectfully point the Examiner to paragraph 24 and Figure 2 of the present invention, which succinctly outlines the single transducer 50 and single electrode 55, wherein the electrode of the present invention is configured to receive either the reference or non-reference ECG signal, depending upon its placement on the patient.

The independent claim 1 is directed to a method of acquiring pulse oximetry and electrocardiogram signals from a patient, the method comprising configuring a single transducer and attaching the single transducer to a patient, wherein the single transducer includes a single electrode such that when the single transducer is attached to the patient, the signal transducer is configured to acquire a pulse oximetry signal with the single transducer and acquire an electrocardiogram signal with the single electrode, wherein the acquired electrocardiogram signal is either one of a reference electrocardiogram signal or a non-reference electrocardiogram signal. As discussed above, Mills I does not teach acquiring an electrocardiogram signal with a single electrode, wherein the acquired electrocardiogram signal is either one of a reference electrocardiogram signal or a non-reference electrocardiogram signal. For at least these reasons the independent claim 1 is allowable over Mills I.

Claims 2, 4-9 and 13-15 are dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over Mills I. Accordingly, claims 2, 4-9 and 13-15 are also allowable as being dependent upon an allowable base claim.

The independent claims 16, 28, 42 and 46 have been amended to include the additional limitations included independent claim 1. For the same reasons as argued above with respect to the independent claim 1, the Applicants respectfully submit that the independent claims 16, 28, 42 and 46 are also allowable over Mills I.

Claims 17-18, 20, 22-23, 29-33, 35, 37-38 and 43-45 are dependent upon the independent claim 16, 28 and 42. As discussed above, the independent claims 16, 28 and 42 are allowable over the teachings of Mills I. Accordingly, claims 17-18, 20, 22-23, 29-

33, 35, 37-38 and 43-45 are also allowable as being dependent upon an allowable base claim.

Claims 1, 10 and 13 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0109772 to Mills (hereinafter Mills II). The Applicants respectfully disagree with this rejection.

Mills II is a method for non-invasive continuous determination of physiological characteristics. Like Mills I, Mills II does not teach a single electrode configured to elect either a reference or non-reference ECG signal from a patient. For at least these reasons, the independent claim 1 is also allowable over Mills II.

Claims 10 and 13 are dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Mills II. Accordingly, claims 10 and 13 are also allowable as being dependent upon an allowable base claim.

Rejections Under 35 U.S.C. §103

Claims 10, 24 and 39 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mills I as applied to claims 1, 16 and 28, and further in view of U.S. Patent No. 5,957,860 to Olive (hereinafter Olive). Claims 10, 24 and 39 are dependent upon the independent claims 1, 16, and 28. As discussed above, the independent claims 1, 16 and 28 are allowable over the teachings of Mills I. Accordingly, claims 10, 24 and 39 are also allowable as being dependent upon an allowable base claim.

Claims 11, 12, 25, 26, 40 and 41 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mills I, in view of Olive as applied to claims 10, 24 and 39 above, and further in view of U.S. Patent No. 5,025,791 to Niwa (hereinafter Niwa). Claims 11, 12, 25, 26, 40 and 41 are dependent upon the independent claims 1, 16 and 28. As discussed above, the independent claims 1, 16 and 28 are allowable over the teachings of Mills I. Accordingly, claims 11, 12, 25, 26, 40 and 41 are also allowable as being dependent upon an allowable base claim.

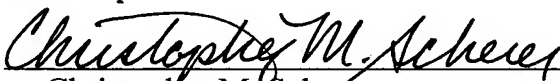
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Claims 19, 21, 34 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mills I as applied to claims 16 and 28 above, and further in view of U.S. Patent 6,023,541 to Merchant et al. (hereinafter Merchant). Claims 19, 21, 34 and 36 are dependant upon the independent claims 16 and 28. As discussed above, the independent claims 16 and 28 are allowable over the teachings of Mills 1. Accordingly, claims 19, 21, 34 and 36 are also allowable as being dependent upon an allowable base claim.

For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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